

CORRECTION

Date October 26, 2010
API # 4707700508

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Bray Liston 8HOperator Well No.: 831258

LOCATION Elevation: 1896'
District: Pleasant

Quadrangle: Valley Point
County: Preston

Top Hole Latitude: xx ft South of 39 ° 37' 30"
Top Hole Longitude: xx ft West of 79 ° 37' 30"
Btm Hole Latitude: xx ft South of xx ° xx' xx"
Btm Hole Longitude: xx ft West of xx ° xx' xx"

Company: Chesapeake Appalachia, LLC
P.O. Box 18496
Oklahoma City, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	40'	40'	Driven
13 3/8"	560'	560'	614 Cu. Ft.
9 5/8"	1603'	1603'	732 Cu. Ft.
5 1/2"	11683'	11683'	2296 Cu. Ft.
2 3/8"	8070'	8070'	

Agent: Eric Gillespie

Inspector: Tristan Jenkins

Date Permit Issued: 08/03/2009

Date Well work commenced: 11/30/2009

Date Well Work completed: 04/18/2010

Verbal Plugging Permission

Granted on / /

Rotary ☒ Cable ☐ Rig

Total Depth (ft): 12430' TVD: 7999'

Fresh Water Depth (ft): 30'Salt Water Depth (ft.): NoneIs coal being mined in area (Yes ☐ No ☒)Coal Depths (ft): None

Open Flow Data

1st Producing Formation Marcellus

Pay Zone Depth 8,102 ft to 12,430 ft

Gas: Initial Open Flow 1,285 Mcf/day

Oil: Initial Open Flow

bbl/day

Final Open Flow xx Mcf/day

Final Open Flow

bbl/day

Time of Open Flow between Initial and Final Tests xx

hours

Static Rock Pressure 5,199 psig after

xx

hours

2nd Producing Formation Marcellus

Pay Zone Depth xx ft to xx ft

Gas: Initial Open Flow Mcf/day

Oil: Initial Open Flow

bbl/day

Final Open Flow xx Mcf/day

Final Open Flow

bbl/day

Time of Open Flow between Initial and Final Tests xx

hours

Static Rock Pressure xx psig after

xx

hours

3rd Producing Formation Marcellus

Pay Zone Depth xx ft to xx ft

Gas: Initial Open Flow Mcf/day

Oil: Initial Open Flow

bbl/day

Final Open Flow xx Mcf/day

Final Open Flow

bbl/day

Time of Open Flow between Initial and Final Tests xx

hours

Static Rock Pressure xx psig after

xx

hours

FEB 11 2010

Perforated Intervals

1 st Stage	Marcellus	0	holes from	11,683 ft to	12,430 ft
2 nd Stage	Marcellus	20	holes from	11,530 ft to	11,612 ft
3 rd Stage	Marcellus	50	holes from	11,128 ft to	11,450 ft
4 th Stage	Marcellus	50	holes from	10,728 ft to	11,050 ft
5 th Stage	Marcellus	50	holes from	10,142 ft to	10,464 ft
6 th Stage	Marcellus	50	holes from	9,702 ft to	10,024 ft
7 th Stage	Marcellus	50	holes from	9,302 ft to	9,624 ft
8 th Stage	Marcellus	50	holes from	8,902 ft to	9,224 ft
9 th Stage	Marcellus	50	holes from	8,502 ft to	8,824 ft
10 th Stage	Marcellus	50	holes from	8,102 ft to	8,424 ft

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl		Breakdown Pressure 7,545 psi
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,290 psi MTP 9,190 psi
	Total Fluid 13,229 bbl	Total Nitrogen 0 scf	Total Sand 311,906 lb of 100 mesh
			Total Sand 300,511 lb of 40/70
	ISIP 6,308 psi	5 min 4,976 psi	
2 nd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,350 psi
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,824 psi MTP 8,946 psi
	Total Fluid 12,313 bbl	Total Nitrogen 0 scf	Total Sand 288,400 lb of 100 mesh
			Total Sand 289,200 lb of 40/70
	ISIP 6,619 psi	5 min 5,732 psi	
3 rd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 7,392 psi
	Average Rate 65 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,784 psi MTP 9,727 psi
	Total Fluid 15,718 bbl	Total Nitrogen 0 scf	Total Sand 312,000 lb of 100 mesh
			Total Sand 268,000 lb of 40/70
	ISIP 6,389 psi	5 min 0 psi	
4 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 8,469 psi
	Average Rate 72 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,620 psi MTP 9,192 psi
	Total Fluid 12,472 bbl	Total Nitrogen 0 scf	Total Sand 300,510 lb of 100 mesh
			Total Sand 285,699 lb of 40/70
	ISIP 6,834 psi	5 min 6,342 psi	
5 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 8,467 psi
	Average Rate 80 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,458 psi MTP 9,119 psi
	Total Fluid 12,307 bbl	Total Nitrogen 0 scf	Total Sand 297,000 lb of 100 mesh
			Total Sand 294,000 lb of 40/70
	ISIP 6,656 psi	5 min 5,989 psi	
6 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,887 psi
	Average Rate 80 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 8,504 psi MTP 9,008 psi
	Total Fluid 13,287 bbl	Total Nitrogen 0 scf	Total Sand 325,500 lb of 100 mesh
			Total Sand 307,200 lb of 40/70
	ISIP 5,983 psi	5 min 4,844 psi	
7 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,290 psi
	Average Rate 93 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,934 psi MTP 8,975 psi
	Total Fluid 12,504 bbl	Total Nitrogen 0 scf	Total Sand 300,000 lb of 100 mesh
			Total Sand 300,000 lb of 40/70
	ISIP 6,004 psi	5 min 5,342 psi	

8 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 3,407 psi	
	Average Rate 89 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,345 psi	MTP 9,072 psi
	Total Fluid 12,164 bbl	Total Nitrogen 0 scf	Total Sand 300,000 lb of 100 mesh
			Total Sand 300,000 lb of 40/70
	ISIP 6,454 psi	5 min 5,267 psi	
9 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,914 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,414 psi	MTP 8,980 psi
	Total Fluid 12,014 bbl	Total Nitrogen 0 scf	Total Sand 311,400 lb of 100 mesh
			Total Sand 310,000 lb of 40/70
	ISIP 7,112 psi	5 min 5,990 psi	
10 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,117 psi	
	Average Rate 91 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,578 psi	MTP 8,985 psi
	Total Fluid 11,512 bbl	Total Nitrogen 0 scf	Total Sand 330,000 lb of 100 mesh
			Total Sand 310,000 lb of 40/70
	ISIP 7,195 psi	5 min 5,986 psi	

77-00508

Well Log

Formation Name	Top	Bottom	Comments
			All depths in feet KBTVD
Sand and Shale	0	936	
Big Lime	936	1087	
Big Injun	1087	1225	
Shale and trace Sand	1225	2350	
Shale	2350	2770	
Silt	2770	2800	
Balltown Sand	2800	2923	
Shale and Silt	2923	3070	
Shale	3070	3400	
Shale and Silt	3400	3760	
Shale, trace Sand	3760	4270	
Shale	4270	4360	
Silt and Shale	4360	4510	
Shale	4510	4690	
Silt and Shale	4690	5500	
Shale	5500	5950	
Shale and Silt	5950	6040	
Shale	6040	6220	
Shale and Silt	6220	6280	
Shale	6280	6430	
Shale and Silt	6430	6460	
Shale	6460	7467	
Geneseo	7467	7525	
Tully	7525'	7577'	
Hamilton	7577'	7914'	
Marcellus	7914'	12430'	

77-00508

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: Marlene Williams
 CHESAPEAKE APPALACHIA, LLC
 By: Marlene Williams, Regulatory Analyst II
 Date: 2-13-2013

2-13-2013

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 10-1-12
API #: 47-085-09958

Farm name: Ernest T. Anderson Operator Well No.: W-1630

LOCATION: Elevation: 1291' Quadrangle: Burnt House

District: Union County: Ritchie
Latitude: 13750 Feet South of 39 Deg. 05 Min. 00 Sec.
Longitude 320 Feet West of 80 Deg. 55 Min. 00 Sec.

Company: Haught Energy Corporation

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
HC 68 Box 14 Smithville, WV 26178				
Agent: Warren R. Haught	13-3/8"	33'	33'	To Surface
Inspector: David Cowan	9-5/8"	295'	295'	To Surface
Date Permit Issued: February 16, 2012	7"	2199'	2199'	To Surface
Date Well Work Commenced: 3/20/2012				
Date Well Work Completed: 10/1/2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 2,720'				
Total Measured Depth (ft): 2,720'				
Fresh Water Depth (ft.): 60'				
Salt Water Depth (ft.): 1,550'				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): NA				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Big Injun Pay zone depth (ft) 2226' - 2280'
Gas: Initial open flow show MCF/d Oil: Initial open flow - Bbl/d
Final open flow 45 MCF/d Final open flow - Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure 250 psig (surface pressure) after 24 Hours

Second producing formation Weir Formation Pay zone depth (ft) 2488' - 2556'
Gas: Initial open flow show MCF/d Oil: Initial open flow - Bbl/d
Final open flow 45 MCF/d Final open flow - Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure 250 psig (surface pressure) after 24 Hours

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Office of Oil and Gas
FEB 08 2013
Department of Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Warren R. Haught, AGENT
Signature Date 2/1/13

Were core samples taken? Yes _____ No X

Newlon Clevenger W-1630

API # 47-085-09958

Formation	Top	Bottom	Remarks
Red Rock & Shale	0	275	
Sand	475	620	
Slate & Shells	620	858	
Red Rock	858	1305	
Dunkard Sand	1305	1324	
Slate & Shells	1324	1402	
Gas Sand	1402	1422	
Slate & Shells	1422	1497	
Gas Sand #2	1497	1505	
Shale	1505	1655	
Long Streak	1655	1745	
Shale	1745	1880	
1st and 2nd Salt Sands	1880	2005	
Shale	2005	2034	
3rd Salt Sand	2034	2042	
Slate & Shells	2042	2101	
Maxton	2101	2141	
Shale	2141	2191	
Big Lime	2190	2251	
Big Injun Sand	2251	2326	
Slate Break/Shale	2326	2430	
Slate & Shells	2430	2486	
Weir	2486	2556	
Shale	2556	2720	
TD	2720		

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE:
API No: 47-097-03792H
Lease No: 63848, 210294, 210295, 210296

Farm Name: WOODY, D.J., ET AL Operator Well No. ALT8CHS (406839)

LOCATION: Elevation: 2460.74' Quadrangle: Alton 7.5'

District: Washington

County: Upshur

Latitude: 1,596 Feet South of: 38 Deg. 47 Min. 30 Sec.

Longitude: 1,600 Feet West of: 80 Deg. 10 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>P.O. Box 1248</u>				
<u>Jane Lew, WV 26378</u>				
Agent: <u>Kent Wright</u>				
Inspector: <u>Bill Hatfield</u>				
Date Permit Issued: <u>05/20/2011</u>				
Date Well Work Commenced: <u>12/18/2011</u>	<u>20"</u>	<u>40'</u>	<u>40'</u>	<u>250 sks</u>
Date Well Work Completed: <u>02/17/2012</u>				
Verbal Plugging: <u>13 3/8"</u>	<u>670'</u>	<u>670'</u>		<u>440 sks</u>
Date Permission granted on:				
Rotary <u>Cable</u> Rig <u>X</u>				
Total Vertical Depth (feet): <u>5500</u>				
Total Measured Depth (feet):				
Fresh Water Depth (ft.): <u>40', 130'</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)?: <u>No</u>				
Coal Depths (ft.): <u>N/A</u>				
Void(s) encountered (N/Y) Depth(s)				

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Environmental Protection

OPEN FLOW DATA 02/12/2013 - NO PRODUCTION CASING RAN - LEFT AS OPEN HOLE. 02/17/2012 - VERTICAL AND HORIZONTAL DRILLING INCOMPLETE. PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow * _____ Bbl/d
Final open flow _____ MCF/d Final open flow * _____ Bbl/d
Time of open flow between initial and final tests _____ 12 Hours
Static Rock Pressure _____ psig (surface pressure) after 12 Hours

Second Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow * _____ MCF/d Oil: Initial open flow * _____ Bbl/d
Final open flow * _____ MCF/d Final open flow * _____ Bbl/d
Time of open flow between initial and final tests * _____ Hours
Static rock Pressure * _____ psig (surface pressure) after * _____ Hours

*** COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date

97-03792

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Rev (5-01)

Page 2 of 2

WELL: ALT8CHS (406839)

Were core samples taken? Yes ___ No X Were cuttings caught during drilling? Yes X No ___

Were ___ Electrical ___ Mechanical, X or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

2/17/2012 NO FRACTURE.

VERTICAL AND HORIZONTAL DRILLING INCOMPLETE.

PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

FORMATIONS ENCOUNTERED:

Fill	0	40	Surface Rock	40	110	Sand&Shale	110	155	Sand	155	368
Shale	368	405	Sand/Shale	405	521	Sand/Shale	521	546	Sand/Shale	546	740
Shale	740	810	Sand&Shale	810	1000	RedRock Shale	1000	1055	Sand/Shale	1055	1160
RedRock/Shale	1160	1180	RedRock/Shale/Sand	1180	1350	Sand	1350	1500	RedRock	1500	1570
Sand&Shale	1570	1680	Sand	1680	1810	Sand&Shale	1810	2580	Shale	2580	2740
Sand&Shale	2740	2860	Sand	2860	2920	Shale	2920	3410	Shale&Sand	3410	3625
Shale	3625	3790	Sand&Shale	3790	3908	Sand/Shale	3908	4130	Sand/Shale	4130	4352
Sand/Shale	4352	4670	Shale	4670	4920	Shale	4920	5500			

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE:
API No: 47-097-03793H
Lease No: 63848, 210294, 210295, 210296

Farm Name: WOODY, D.J., ET AL Operator Well No. ALT8DHS (406841)

LOCATION: Elevation: 2460.74' Quadrangle: Alton 7.5'

District: Washington County: Upshur
Latitude: 1,575 Feet South of: 38 Deg. 47 Min. 30 Sec.
Longitude: 1,590 Feet West of: 80 Deg. 10 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>P.O. Box 1248</u>				
<u>Jane Lew, WV 26378</u>				
Agent: <u>Kent Wright</u>				
Inspector: <u>Bill Hatfield</u>				
Date Permit Issued: <u>05/20/2011</u>				
Date Well Work Commenced: <u>11/19/2011</u>	<u>20"</u>	<u>40'</u>	<u>40'</u>	<u>80 sks</u>
Date Well Work Completed: <u>02/17/2012</u>				
Verbal Plugging: <u>13 3/8"</u>		<u>667'</u>	<u>667'</u>	<u>465 sks</u>
Date Permission granted on:				
Rotary <u>Cable</u> Rig <u>X</u>				
Total Vertical Depth (feet): <u>4500</u>				
Total Measured Depth (feet):				
Fresh Water Depth (ft.): <u>40', 130'</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)?: <u>No</u>				
Coal Depths (ft.): <u>N/A</u>				
Void(s) encountered (N/Y) Depth(s):				

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**WV Department of
Environmental Protection**

OPEN FLOW DATA

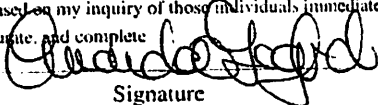
02/12/2013 - NO PRODUCTION CASING RAN - LEFT AS OPEN HOLE
AND HORIZONTAL DRILLING INCOMPLETE. PLAN ON RECONVENING THE VERTICAL AND
HORIZONTAL DRILLING IN 2014.

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow * Bbl/d
Final open flow _____ MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests _____ 12 Hours
Static Rock Pressure _____ psig (surface pressure) after 12 Hours

Second Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
Static rock Pressure * psig (surface pressure) after * Hours

*** COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all
the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that
the information is true, accurate, and complete.


Signature

2-14-13
Date

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Rev (5-01)
Page 2 of 2

WELL: ALT8DHS (406841)

Were core samples taken? Yes No X Were cuttings caught during drilling? Yes X No

Were Electrical Mechanical, X or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

2/17/2012 NO FRACTURE.

VERTICAL AND HORIZONTAL DRILLING INCOMPLETE.

PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

FORMATIONS ENCOUNTERED:

[illegible]

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE:
API No: 47-097-03794H
Lease No: 63848, 210294, 210295, 210296

Farm Name: WOODY, D.J., ET AL

Operator Well No. ALT8EHS (406957)

LOCATION: Elevation: 2460.74'

Quadrangle: Alton 7.5'

District: Washington

County: Upshur

Latitude: 1,566 Feet South of: 38 Deg. 47 Min. 30 Sec.

Longitude: 1,583 Feet West of: 80 Deg. 10 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 1248 Jane Lew, WV 26378				
Agent: Kent Wright				
Inspector: Bill Hatfield				
Date Permit Issued: 05/20/2011				
Date Well Work Commenced: 11/01/2011	20"	40'	40'	50 sks
Date Well Work Completed: 02/17/2012				
Verbal Plugging: 13 3/8"		650'	650'	430 sks
Date Permission granted on:				
Rotary Cable Rig X				
Total Vertical Depth (feet): 4500				
Total Measured Depth (feet):				
Fresh Water Depth (ft.): 40', 130'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s)				

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Office of Oil & Gas

FEB 14 2013

WV Department of
Environmental Protection

OPEN FLOW DATA

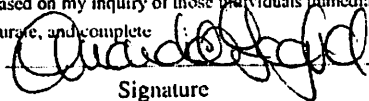
02/12/2013 - NO PRODUCTION CASING RAN - LEFT AS OPEN HOLE. 02/17/2012 - VERTICAL AND HORIZONTAL DRILLING INCOMPLETE. PLAN ON RECOVERING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow * Bbl/d
Final open flow _____ MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests _____ 12 Hours
Static Rock Pressure _____ psig (surface pressure) after 12 Hours

Second Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
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Signature

2-14-13
Date

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WELL: ALT8EHS (406957)

Were core samples taken? Yes _____ No X Were cuttings caught during drilling? Yes X No _____

Were Electrical Mechanical, X or Geophysical logs recorded on this well?

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PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

2/17/2012 NO FRACTURE.

VERTICAL AND HORIZONTAL DRILLING INCOMPLETE.

PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

FORMATIONS ENCOUNTERED:

[illegible]

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE:
API No: **47-097-03795H**
Lease No: 63848, 210294, 210295, 210296

Farm Name: WOODY, D.J., ET AL Operator Well No. ALT8FHS (407063)

LOCATION: Elevation: 2460.74' Quadrangle: Alton 7.5'

District: Washington County: Upshur
Latitude: 1,551 Feet South of: 38 Deg. 47 Min. 30 Sec.
Longitude: 1,595 Feet West of: 80 Deg. 10 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: <u>P.O. Box 1248</u>				
<u>Jane Lew, WV 26378</u>				
Agent: <u>Kent Wright</u>				
Inspector: <u>Bill Hatfield</u>				
Date Permit Issued: <u>05/20/2011</u>				
Date Well Work Commenced: <u>10/17/2011</u>	<u>20"</u>	<u>40'</u>	<u>40'</u>	<u>60 sks</u>
Date Well Work Completed: <u>02/17/2012</u>				
Verbal Plugging: <u>13 3/8"</u>	<u>690'</u>	<u>690'</u>	<u>425 sks</u>	
Date Permission granted on:				
Rotary <u>Cable</u> Rig <u>X</u>				
Total Vertical Depth (feet): <u>4500</u>				
Total Measured Depth (feet):				
Fresh Water Depth (ft.): <u>40', 130'</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)?: <u>No</u>				
Coal Depths (ft.): <u>N/A</u>				
Void(s) encountered (N/Y) Depth(s)				

RECEIVED
Office of Oil & Gas

FEB 14 2013

WV Department of
Environmental Protection

OPEN FLOW DATA 02/12/2013 - NO PRODUCTION CASING RAN - LEFT AS OPEN HOLE. 02/17/2012 - VERTICAL AND HORIZONTAL DRILLING INCOMPLETE. PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow * Bbl/d
Final open flow _____ MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests _____ 12 Hours
Static Rock Pressure _____ psig (surface pressure) after 12 Hours

Second Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
Static rock Pressure * psig (surface pressure) after * Hours

*** COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date

—

Page 2 of 2

WELL: ALT8FHS (407063)

Were core samples taken? Yes _____ No X Were cuttings caught during drilling? Yes X No _____

Were Electrical Mechanical, X or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

2/17/2012 NO FRACTURE.

VERTICAL AND HORIZONTAL DRILLING INCOMPLETE.

PLAN ON RECONVENING THE VERTICAL AND HORIZONTAL DRILLING IN 2014.

FORMATIONS ENCOUNTERED:

[illegible]

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Hohman HBP S 1HOperator Well No.: 627376

LOCATION Elevation: 1494'
District: Proctor
Latitude: 11320 ft South of
Longitude: 9990 ft West of

Quadrangle: Wileyville
County: Wetzel

39° 42' 30"
80° 40' 00"

Company: Chesapeake Appalachia, L.L.C.
P.O. Box 18496
OKC, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	58'	58'	Driven
13 3/8"	1442'	1442'	1546 Cu. Ft.
9 5/8"	2785'	2785'	805 Cu. Ft.
5 1/2"	12,153	12,153	2760 Cu. Ft.

Agent: Eric Gillespie

Inspector: David Scranage

Date Permit Issued: 1/25/2010

Date Well work commenced: 2/17/2010

Date Well Work completed: 3/21/2010

Verbal Plugging Permission

Granted on / /

Rotary ☒ Cable ☐ Rig

Total Depth (ft): 12,153' TVD (ft): 7115'

Fresh Water Depth (ft): 438'

Salt Water Depth (ft.): NA

Is coal being mined in area (Yes ☐ No ☒)

Coal Depths (ft): 230' & 1280'

Was this well logged and plugged back?

Yes ☐ No ☒ if yes -

depth cement plug set _____

Open Flow Data

1st Producing Formation

Pay Zone Depth 7,685 ft to 12,007 ft

Gas: Initial Open Flow 2,195 Mcf/day

Oil: Initial Open Flow bbl/day

Final Open Flow N/A Mcf/day

Final Open Flow bbl/day

Time of Open Flow between Initial and Final Tests In

Line

hours

Static Rock Pressure 4,625 psig after N/A

hours

2nd Producing Formation

Pay Zone Depth ft to ft

Gas: Initial Open Flow N/A Mcf/day

Oil: Initial Open Flow bbl/day

Final Open Flow N/A Mcf/day

Final Open Flow bbl/day

Time of Open Flow between Initial and Final Tests hours

Static Rock Pressure N/A psig after

hours

3rd Producing Formation

Pay Zone Depth ft to ft

Gas: Initial Open Flow N/A Mcf/day

Oil: Initial Open Flow bbl/day

Final Open Flow N/A Mcf/day

Final Open Flow bbl/day

Time of Open Flow between Initial and Final Tests hours

Static Rock Pressure N/A psig after

hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Perforated Intervals

1 st Stage	Marcellus	50	holes from	11,685 ft to	12,007 ft
2 nd Stage	Marcellus	50	holes from	11,285 ft to	11,607 ft
3 rd Stage	Marcellus	50	holes from	10,885 ft to	11,207 ft
4 th Stage	Marcellus	50	holes from	10,485 ft to	10,807 ft
5 th Stage	Marcellus	50	holes from	10,085 ft to	10,407 ft
6 th Stage	Marcellus	50	holes from	9,685 ft to	10,007 ft
7 th Stage	Marcellus	50	holes from	9,285 ft to	9,607 ft
8 th Stage	Marcellus	50	holes from	8,885 ft to	9,207 ft
9 th Stage	Marcellus	50	holes from	8,485 ft to	8,807 ft
10 th Stage	Marcellus	50	holes from	8,085 ft to	8,407 ft
11 th Stage	Marcellus	50	holes from	7,685 ft to	8,007 ft

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl		Breakdown Pressure 5,493 psi
	Average Rate 79 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,203 psi MTP 8,627 psi
	Total Fluid 12,233 bbl	Total Nitrogen 0 scf	Total Sand 149,000 lb of 100 mesh
			Total Sand 345,000 lb of 40/70
	ISIP 3,915 psi	5 min 3,197 psi	
2 nd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,404 psi
	Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 6,251 psi MTP 8,906 psi
	Total Fluid 10,484 bbl	Total Nitrogen 0 scf	Total Sand 140,627 lb of 100 mesh
			Total Sand 342,132 lb of 40/70
	ISIP 4,506 psi	5 min 3,619 psi	
3 rd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,700 psi
	Average Rate 88 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 6,780 psi MTP 8,906 psi
	Total Fluid 10,706 bbl	Total Nitrogen 0 scf	Total Sand 139,710 lb of 100 mesh
			Total Sand 345,590 lb of 40/70
	ISIP 4,328 psi	5 min 3,547 psi	
4 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 4,794 psi
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 6,602 psi MTP 8,479 psi
	Total Fluid 10,885 bbl	Total Nitrogen 0 scf	Total Sand 146,150 lb of 100 mesh
			Total Sand 347,594 lb of 40/70
	ISIP 4,743 psi	5 min 3,830 psi	
5 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 6,040 psi
	Average Rate 88 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 6,721 psi MTP 9,172 psi
	Total Fluid 10,453 bbl	Total Nitrogen 0 scf	Total Sand 143,074 lb of 100 mesh
			Total Sand 346,204 lb of 40/70
	ISIP 4,294 psi	5 min 3,510 psi	
6 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,576 psi
	Average Rate 83 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 7,000 psi MTP 8,042 psi
	Total Fluid 10,107 bbl	Total Nitrogen 0 scf	Total Sand 141,561 lb of 100 mesh
			Total Sand 347,729 lb of 40/70
	ISIP 4,388 psi	5 min 3,994 psi	
7 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl		Breakdown Pressure 5,268 psi
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>		ATP 6,603 psi MTP 8,223 psi
	Total Fluid 10,232 bbl	Total Nitrogen 0 scf	Total Sand 143,157 lb of 100 mesh
			Total Sand 343,786 lb of 40/70
	ISIP 4,318 psi	5 min 3,680 psi	

8 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 4,920 psi	
	Average Rate 82 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,392 psi	MTP 7,843 psi
	Total Fluid 9,858 bbl	Total Nitrogen 0 scf	Total Sand 141,612 lb of 100 mesh
			Total Sand 344,051 lb of 40/70
	ISIP 4,409 psi	5 min 3,549 psi	
9 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,928 psi	
	Average Rate 69 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,322 psi	MTP 9,450 psi
	Total Fluid 18,503 bbl	Total Nitrogen 0 scf	Total Sand 143,549 lb of 100 mesh
			Total Sand 340,423 lb of 40/70
	ISIP 4,271 psi	5 min 3,279 psi	
10 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,325 psi	
	Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,545 psi	MTP 9,985 psi
	Total Fluid 10,069 bbl	Total Nitrogen 0 scf	Total Sand 140,527 lb of 100 mesh
			Total Sand 344,344 lb of 40/70
	ISIP 5,378 psi	5 min 3,684 psi	
11 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,337 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,462 psi	MTP 7,909 psi
	Total Fluid 9,676 bbl	Total Nitrogen 0 scf	Total Sand 139,678 lb of 100 mesh
			Total Sand 344,047 lb of 40/70
	ISIP 4,684 psi	5 min 3,642 psi	

103.02458

Well Log

Formation Name	Top	Bottom	Comments
SH/SS	0	560	Mud logger
SH/SILT	560	620	Mud logger
SH/SS	620	680	Mud logger
SH	680	730	Mud logger
SH/SS	730	860	Mud logger
SHALE	860	950	Mud logger
SH/SS	950	980	Mud logger
SH/SILT/SS	980	1040	Mud logger
SHALE	1040	1100	Mud logger
SH/SILT	1100	1130	Mud logger
SH/SILT/LS	1130	1160	Mud logger
SH/LS	1160	1220	Mud logger
SH/SILT/LS	1220	1250	Mud logger
SH/SILT	1250	1291	Mud logger
Pittsburgh Coal	1291	1301	Mud logger
SH/SILT	1301	1370	Mud logger
SH/SS	1370	1430	Mud logger
SH	1430	1530	Mud logger
SH/LIME	1530	1590	Mud logger
SH	1590	1680	Mud logger
SH/SS	1680	1770	Mud logger
SH/SS/COAL	1770	1800	Mud logger
SH/SS	1800	1830	Mud logger
SS/trace shale	1830	1890	Mud logger
SH/SS	1890	1995	Mud logger
Salt Sands	1995	2203	Mud logger
Maxton	2203	2378	Mud logger
Big Lime	2378	2408	Mud logger
Big Injun	2408	2681	Mud logger
Geneseo	7038	7053	MWD GR
Tully	7053	7086	MWD GR
Hamilton	7086	7425	MWD GR
Marcellus	7425	12153'	MWD GR

Signed:

Marlene Williams

CHESAPEAKE APPALACHIA, LLC

By: Marlene Williams – Regulatory Analyst II

Date: 2-13-2013

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: **Hohman HBP S 3H**Operator Well No.: **627377**LOCATION Elevation: **1494'**Quadrangle: **Wileyville**District: **Proctor**County: **Wetzel**Latitude: **11,300 ft South of 39° 42' 30"**Longitude: **10,00 ft West of 80° 40' 00"**

Company: Chesapeake Appalachia, L.L.C.
P.O. Box 18496
OKC, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	40	40'	Driven
13 3/8"	1448'	1448'	1522 Cu. Ft.
9 5/8"	2783'	2783'	1198 Cu. Ft.
5 1/2"	12,473'	12,473'	1808 Cu. Ft.

Agent: Eric Gillespie

Inspector: David Scranage

Date Permit Issued: **6/4/2009**Date Well work commenced: **3/27/2010**Date Well Work completed: **8/2/2010**

Verbal Plugging Permission

Granted on / /

Rotary ☒ Cable ☐ RigTotal Depth (ft): **12,480'** TVD (ft): **7120'**Fresh Water Depth (ft): **438'**Salt Water Depth (ft.): **NA**Is coal being mined in area (Yes ☐ No ☒)Coal Depths (ft): **230' & 1280'**

Was this well logged and plugged back?

Yes ☐ No ☒ if yes -

depth cement plug set _____,

Open Flow Data

1st Producing FormationPay Zone Depth **7,398 ft to 12,341 ft**Gas: Initial Open Flow **3,371 Mcf/day**

Oil: Initial Open Flow

bbl/day

Final Open Flow **N/A Mcf/day**

Final Open Flow

bbl/day

Time of Open Flow between Initial and Final Tests In

Line

hours

Static Rock Pressure **4,628 psig after N/A**

hours

2nd Producing FormationPay Zone Depth **ft to ft**Gas: Initial Open Flow **N/A Mcf/day**

Oil: Initial Open Flow

bbl/day

Final Open Flow **N/A Mcf/day**

Final Open Flow

bbl/day

Time of Open Flow between Initial and Final Tests hours

Static Rock Pressure **N/A psig after**

hours

3rd Producing FormationPay Zone Depth **ft to ft**Gas: Initial Open Flow **N/A Mcf/day**

Oil: Initial Open Flow

bbl/day

Final Open Flow **N/A Mcf/day**

Final Open Flow

bbl/day

Time of Open Flow between Initial and Final Tests hours

Static Rock Pressure **N/A psig after**

hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Perforated Intervals

1 st Stage	Marcellus	50	holes from	12,039 ft to	12,341 ft
2 nd Stage	Marcellus	50	holes from	11,664 ft to	11,966 ft
3 rd Stage	Marcellus	50	holes from	11,289 ft to	11,591 ft
4 th Stage	Marcellus	50	holes from	10,914 ft to	11,216 ft
5 th Stage	Marcellus	50	holes from	10,539 ft to	10,841 ft
6 th Stage	Marcellus	50	holes from	10,160 ft to	10,466 ft
7 th Stage	Marcellus	50	holes from	9,787 ft to	10,091 ft
8 th Stage	Marcellus	50	holes from	8,898 ft to	9,195 ft
9 th Stage	Marcellus	50	holes from	8,523 ft to	8,823 ft
10 th Stage	Marcellus	50	holes from	8,148 ft to	8,450 ft
11 th Stage	Marcellus	50	holes from	7,768 ft to	8,075 ft
12 th Stage	Marcellus	50	holes from	7,398 ft to	7,700 ft

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl	Breakdown Pressure 5,303 psi	
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,546 psi MTP 8,653 psi	
	Total Fluid 11,448 bbl	Total Nitrogen 0 scf	Total Sand 151,000 lb of 100 mesh
			Total Sand 383,000 lb of 40/70
	ISIP 4,313 psi	5 min 3,660 psi	
2 nd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,644 psi	
	Average Rate 88 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,868 psi MTP 8,136 psi	
	Total Fluid 10,458 bbl	Total Nitrogen 0 scf	Total Sand 140,880 lb of 100 mesh
			Total Sand 344,174 lb of 40/70
	ISIP 4,286 psi	5 min 3,529 psi	
3 rd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,525 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,846 psi MTP 8,702 psi	
	Total Fluid 10,642 bbl	Total Nitrogen 0 scf	Total Sand 138,318 lb of 100 mesh
			Total Sand 346,971 lb of 40/70
	ISIP 4,595 psi	5 min 3,675 psi	
4 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,745 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,648 psi MTP 8,800 psi	
	Total Fluid 10,604 bbl	Total Nitrogen 0 scf	Total Sand 143,777 lb of 100 mesh
			Total Sand 338,382 lb of 40/70
	ISIP 4,621 psi	5 min 3,658 psi	
5 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,870 psi	
	Average Rate 79 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,649 psi MTP 8,946 psi	
	Total Fluid 11,294 bbl	Total Nitrogen 0 scf	Total Sand 144,134 lb of 100 mesh
			Total Sand 342,237 lb of 40/70
	ISIP 4,485 psi	5 min 3,540 psi	
6 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,814 psi	
	Average Rate 81 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,576 psi MTP 8,890 psi	
	Total Fluid 10,232 bbl	Total Nitrogen 0 scf	Total Sand 145,404 lb of 100 mesh
			Total Sand 341,961 lb of 40/70
	ISIP 4,405 psi	5 min 3,622 psi	
7 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,863 psi	
	Average Rate 84 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,777 psi MTP 8,450 psi	
	Total Fluid 10,165 bbl	Total Nitrogen 0 scf	Total Sand 142,809 lb of 100 mesh
			Total Sand 340,487 lb of 40/70
	ISIP 4,317 psi	5 min 3,577 psi	

103.02459

8 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,829 psi	
	Average Rate 89 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,910 psi	MTP 8,527 psi
	Total Fluid 10,038 bbl	Total Nitrogen 0 scf	Total Sand 142,242 lb of 100 mesh
			Total Sand 341,070 lb of 40/70
	ISIP 4,210 psi	5 min 3,522 psi	
9 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,127 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,787 psi	MTP 8,462 psi
	Total Fluid 9,886 bbl	Total Nitrogen 0 scf	Total Sand 139,660 lb of 100 mesh
			Total Sand 337,904 lb of 40/70
	ISIP 4,558 psi	5 min 3,503 psi	
10 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,025 psi	
	Average Rate 79 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,610 psi	MTP 8,235 psi
	Total Fluid 11,284 bbl	Total Nitrogen 0 scf	Total Sand 140,683 lb of 100 mesh
			Total Sand 342,468 lb of 40/70
	ISIP 4,668 psi	5 min 3,573 psi	
11 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,408 psi	
	Average Rate 80 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,119 psi	MTP 8,085 psi
	Total Fluid 12,648 bbl	Total Nitrogen 0 scf	Total Sand 153,728 lb of 100 mesh
			Total Sand 339,972 lb of 40/70
	ISIP 4,275 psi	5 min 3,383 psi	
12 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,840 psi	
	Average Rate 88 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 6,984 psi	MTP 8,785 psi
	Total Fluid 10,231 bbl	Total Nitrogen 0 scf	Total Sand 156,243 lb of 100 mesh
			Total Sand 347,361 lb of 40/70
	ISIP 4,722 psi	5 min 3,428 psi	

Well Log

[illegible]

Signed:

Maxine Williams

CHESAPEAKE APPALACHIA, LLC

By: Marlene Williams, Regulatory Analyst II

Date: 2.13.2013

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 02/06/2013
API #: 47-25-00038

Farm name: Plum Creek Timberlands, LP Operator Well No.: PCSF 1-1H

LOCATION: Elevation: 3,569 Quadrangle: Fork Mountain

District: Falling Springs County: Greenbrier
Latitude: 8.851 Feet South of 38 Deg. 12 Min. 30 Sec.
Longitude 11.888 Feet West of 80 Deg. 25 Min. 00 Sec.

Company: BRC Operating Company, LLC

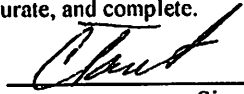
Address: 200 Crescent Court, Suite 200	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Dallas, TX 75201	20"	100'	98'	
Agent: Marc A. Monteleone	13.375"	1,541'	1,539'	1,302 Lead / 180 Tail
Inspector: Gary Kennedy				
Date Permit Issued: 7/14/11				
Date Well Work Commenced: 10/14/11				
Date Well Work Completed: 11/14/11	Cement plug		1,236' - 2,267'	553
Verbal Plugging: Gary Kennedy	Cement plug		13.375" from 2' - 98'	78
Date Permission granted on: 11/7/11 Plugging Permit issued 4/10/12.				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 4,886				
Total Measured Depth (ft): 4,886				
Fresh Water Depth (ft.): 1,500				
Salt Water Depth (ft.): 2,350				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 610				
Void(s) encountered (N/Y) Depth(s) N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Not Applicable Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

2/7/2013
Date

RECEIVED
Office of Oil and Gas
FEB 08 2013
West Virginia Department of
Environmental Protection

20-00000

Were core samples taken? Yes ☒ No ☐

Were cuttings caught during drilling? Yes ☒ No ☐

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____
Gamma Ray from 0' - 2338'

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

N/A

Plug Back Details Including Plug Type and Depth(s): Cement plug 13 3/8" casing and 12.25" open hole, from 1,236' to 2,267' / 98 bbls. Cement plug 13 3/8" casing, from 2' to 98' / 14 bbls.

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
Surface: _____

Ravencliff Sandstone	1,584	1,604
Lower Maxon Sandstone	1,908	1,928
Greenbrier Limestone	2,010	2,060
Big Lime Limestone	2,192	2,564
Injun Sandstone	2,564	2,596
Squaw Shale	2,596	2,762
Weir Sandstone	2,762	3,183
Berea Sandstone	3,183	3,269
Gordon Sandstone	3,269	3,301
Huron Shale	4,278	

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 02/06/2013
API #: 47-25-00039

Farm name: Plum Creek Timberlands, LP Operator Well No.: PCSF 1-2H

LOCATION: Elevation: 3,578 Quadrange: Fork Mountain

District: Falling Springs County: Greenbrier
Latitude: 8,862 Feet South of 38 Deg. 12 Min. 30 Sec.
Longitude 11,977 Feet West of 80 Deg. 25 Min. 00 Sec.

Company: BRC Operating Company, LLC

Address:	200 Crescent Court, Suite 200	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	Dallas, TX 75201	20"	130'	130'	207
Agent:	Marc A. Monteleone	13 3/8"	2,233'	2,223'	1,521 Lead/1,021 Tail
Inspector:	Gary Kennedy	9 5/8"	6,457	6,457	1,796 Lead/746 Tail
Date Permit Issued:	7/14/11				
Date Well Work Commenced:	11/16/11				
Date Well Work Completed:	12/27/11	Cement plug		6,300' - 8,500'	1,027
Verbal Plugging:	Gary Kennedy				
Date Permission granted on:	12/18/11 Partial Plugging Permit issued 4/9/12.				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>					
Total Vertical Depth (ft):	8,262				
Total Measured Depth (ft):	12,528				
Fresh Water Depth (ft.):	1,500				
Salt Water Depth (ft.):	2,350				
Is coal being mined in area (N/Y)?	N				
Coal Depths (ft.):	610				
Void(s) encountered (N/Y) Depth(s)	N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Not Applicable Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

2/7/2013
Date

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Office of Oil and Gas
FEB 08 2013
WV Department of
Environmental Protection

250039

Were core samples taken? Yes _____ No XWere cuttings caught during drilling? Yes X No _____Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Platform Express 2,258' - 6,500'
MWD Gamma Ray from 6,510' - 12,530'. (MWD - Measured While Drilling)

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

N/A

Plug Back Details Including Plug Type and Depth(s): Set 8 1/2" open hole cement plugs: from 8,500' to 6,300' /183 bbls.

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
Surface: _____

Ravenclyff Sandstone	1,591	1,610
Lower Maxon Sandstone	1,922	1,979
Greenbrier Limestone	2,018	2,058
Big Lime Limestone	2,192	2,600
Injun Sandstone	2,600	2,638
Squaw Shale	2,638	2,660
Berea Sandstone	3,238	3,285
Gordon Sandstone	3,325	3,340
Rhinestreet Shale	7,670 TVD	7,756 TVD
Top Marcellus Shale	7,820 TVD	

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 5/16/2012
API #: 47-033-05541

Farm name: Salerno, Albert, ET AL

Operator Well No.: Harbert East A 1H

LOCATION: Elevation: 1243'

Quadrangle: Shinnston 7.5'

District: Eagle

County: Harrison

Latitude: 11,610 Feet South of 39 Deg. 25 Min. 00 Sec.

Longitude 3,570 Feet West of 80 Deg. 20 Min. 00 Sec.

Company: XTO Energy, Inc.

Address: PO Box 1008, Jane Lew, WV 26378	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	20"	117'	117'	CTS - 27 BBLS
Agent: Gary Beall	13 3/8"	529'	529'	CTS - 424 sks
Inspector: Tristan Jenkins	9 5/8"	2775'	2775'	957 sks
Date Permit Issued: 5/02/2011	5 1/2"	10727'	10727'	1260 sks
Date Well Work Commenced: 8/25/2011				
Date Well Work Completed: 4/26/2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7,192				
Total Measured Depth (ft): 10,730				
Fresh Water Depth (ft.): 175', 250'				
Salt Water Depth (ft.): None Noted				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): None Noted				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7170 - 7192

Gas: Initial open flow Show MCF/d Oil: Initial open flow Bbl/d

Final open flow Show MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)


Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

6-14-12
Date

38-05511

Were core samples taken? Yes _____ No ☒Were cuttings caught during drilling? Yes ☒ No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

GR, ROP, VS, TVD, MWD, Mudlogs

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Stg 1 Marcellus; 10,479'-10,657'; 72 shots; Slick water frac; Avg treating 7046 psi@82 bpm; 75,541#s 100 mesh; 247,645#s 30/50 mesh; 6,951 bbl water, 698 bbl treated water

Stg 2 Marcellus; 10,220'-10,398'; 72 shots; Slick water frac; Avg treating 7410 psi@85 bpm; 75,764#s 100 mesh; 265,669#s 30/50 mesh; 7,568 bbl water, 501 bbl treated water

Stg 3 Marcellus; 9,961'-10,139'; 72 shots; Slick water frac; Avg treating 7166 psi@84 bpm; 75,853#s 100 mesh; 265,376#s 30/50 mesh; 7,677 bbl water, 701 bbl treated water

Stg 4 Marcellus; 9,702'-9,880'; 72 shots; Slick water frac; Avg treating 6991 psi@85 bpm; 73,667#s 100 mesh; 272,962#s 30/50 mesh; 7,934 bbl water, 674 bbl treated water

Stg 5 Marcellus; 9,443'-9,621'; 72 shots; Slick water frac; Avg treating 6801 psi@85 bpm; 75,766#s 100 mesh; 270,656#s 30/50 mesh; 7,739 bbl water, 851 bbl treated water

Stg 6 Marcellus; 9,184'-9,362'; 72 shots; Slick water frac; Avg treating 6840 psi@83 bpm; 74,641#s 100 mesh; 267,067#s 30/50 mesh; 7,479 bbl water, 1001 bbl treated water

Plug Back Details Including Plug Type and Depth(s):

See additional pages

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

Fill 0/127

SS 127/164

SH, SS 164/220 Hole Damp @ 175'

SH 220/225

SH, SS 225/268 2" Stream H2O @ 250'

SS 268/395

SH 395/410

SS 410/420

SH 420/470

SS 470/540

SH, SS 540/667

SH 667/920

SS, SH 920/1250

SH 1250/1732

See additional pages

33-0 5541

Harbert East A 1H 47-033-05541

Additional Stages

Stg 7 Marcellus; 8,925'-9,103'; 72 shots; Slick water frac; Avg treating 6798 psi@85 bpm; 76,248#s 100 mesh; 268,813#s 30/50 mesh; 7,987 bbl water, 539 bbl treated water
Stg 8 Marcellus; 8,666'-8,844'; 72 shots; Slick water frac; Avg treating 6522 psi@84 bpm; 75,157#s 100 mesh; 270,671#s 30/50 mesh; 8,530 bbl water
Stg 9 Marcellus; 8,407'-8,585'; 72 shots; Slick water frac; Avg treating 6286 psi@84 bpm; 76,032#s 100 mesh; 266,625#s 30/50 mesh; 8,573 bbl water
Stg 10 Marcellus; 8,148'-8,326'; 72 shots; Slick water frac; Avg treating 6518 psi@85 bpm; 75,254#s 100 mesh; 268,900#s 30/50 mesh; 8,729 bbl water
Stg 11 Marcellus; 7,889'-8,067'; 72 shots; Slick water frac; Avg treating 6518 psi@85 bpm; 74,907#s 100 mesh; 267,598#s 30/50 mesh; 8,548 bbl water
Stg 12 Marcellus; 7,630'-7,808'; 72 shots; Slick water frac; Avg treating 6605 psi@85 bpm; 76,069#s 100 mesh; 266,198#s 30/50 mesh; 8,416 bbl water

Additional Formation Log

SS,SH	1732	2030
SH	2030	2485
SS,SH	2485	2674
SH	2674	2775
SLTST,SH	2775	2800
SLTST,SH,SS	2800	2860
SH, SLTST	2860	2980
SS,SLTST	2980	3010
SH,SLTST	3010	3070
SLTST,SH,SS	3070	3100
SH,SLTST	3100	3190
SH	3190	3220
SH,SLTST	3220	3280
SH	3280	3310
SLTST,SS,SH	3310	3370
SH	3370	3400
SH, SLTST,SS	3400	3430
SH,SLTST	3430	3490
SH,SS,SLTST	3490	3610
SH,SLTST	3610	3640
SLTST,SH,SS	3640	3790
SH,SLTST	3790	4060
SH,SS,SLTST	4060	4150
SH	4150	4180
SS,SLTST,SH	4180	4240
SH,SLTST,SS	4240	4360
SH	4360	4510
SH,SLTST	4510	4540
SS,SLTST,SH	4540	4570
SH,SLTST	4570	4810

36-00847

Harbert East A 1H 47-033-05541

Additional Formation Log

SH	4810	4900
SH & SLTST	4900	4960
SH	4960	5020
SH & SLTST	5020	5050
SH	5050	5770
SH & SLTST	5770	5800
SH	5800	7100
LS, SH	7100	7190
SH & LS	7190	7200
SH	7200	7450
SH & LS	7450	7530
SH	7530	9980
SH, MRST	9980	10370
SH	10370	10730

Formation	Tops
BIG INJUN*	1533
SQUAW SAND*	1623
GANTZ SAND*	2003
50FT SAND*	2054
30FT SAND*	2146
GORDON SAND*	2219
LWR GORDON *	2330
4TH SAND*	2422
5TH SAND*	2490
UPPER BALLTOWN*	3323
BALLTOWN*	3409
LOWER BALLTOWN*	3500
GENESEO SHALE	6904
TULLY LIMESTONE	6943
HAMILTON SHALE	6997
MARCELLUS SHALE	7061
PURCELL LIMESTONE	7160

* Tops projected from offset log due to air drilling and therefore not logging this section

Tully	7108 MD
	6943 TVD
Hamilton	7180 MD
	6997 TVD
Marcellus	7277 MD
	7061 TVD

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm name: FULLERTON, TIMOTHY & SUSAN Operator Well No.: HIRAM LYNCH 226
LOCATION: Elevation: 1,298' Quadrangle: WOLF SUMMIT 7.5'
District: TEN MILE County: HARRISON
Latitude: 4,560 Feet south of 39 Deg 17 Min 30 Sec.
Longitude: 6,105 Feet west of 80 Deg 27 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Tristan Jenkins				
Date Permit Issued:	05/31/2012				
Date Well Work Commenced:	07/23/2012				
Date Well Work Completed:	09/11/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable	Rig	7"	483.75'	483.75'	500 sks
Total vertical Depth (ft):	2934'				
Total Measured Depth (ft):	2952'				
Fresh Water Depth (ft):	20', 80', 360'	4 1/2"	2909'	2909'	200 sks
Salt Water Depth (ft):	none				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	none				
Void(s) encountered (Y/N) depth(s): Y 440'-450'					
9" mine liner installed over 7" casing, depth mine liner installed 435'-455', Mine liner grouted in w/ cement.					

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DEC 10 2012

OPEN FLOW DATA

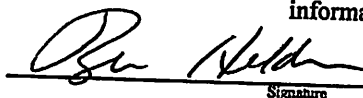
* Waterflood Producer

This well drilled directionally 81 ° NW a distance of 250'

WV Department of
Environmental Protection
Pay zone depth (ft) 2805.5'-2807.5'
2816'-2820.5'

Producing formation Fifth Sand
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
Static rock pressure * psig (surface pressure) after * Hours
Second producing formation Pay zone depth (ft)
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
Static rock pressure * psig (surface pressure) after * Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

11/19/12
Date

Were cuttings caught during drilling? No 3305610

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Well Log: All depths are measured relative to KB (8' AGL).

T.D. -Logger	2944	KB
T.D. -Driller	2952	KB

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm name: ENGLAND, WAYNE & BEATRICE Operator Well No.: ALEX. STONESTREET 227

LOCATION: Elevation: 1,036' Quadrangle: WOLF SUMMIT 7.5'

District: TEN MILE County: HARRISON
Latitude: 5,980 Feet south of 39 Deg 17 Min 30 Sec.
Longitude: 8,145 Feet west of 80 Deg 27 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Tristan Jenkins				
Date Permit Issued:	08/06/2012				
Date Well Work Commenced:	08/24/2012				
Date Well Work Completed:	09/11/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable Rig		7"	258'	258'	80 sks
Total vertical Depth (ft):	2660'				
Total Measured Depth (ft):	2660'				
Fresh Water Depth (ft):	60', 90'	4 1/2"	2637.6'	2637.6'	150 sks
Salt Water Depth (ft):	none				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	205'-214'				
Void(s) encountered (Y/N) depth(s):	NONE				
		RECEIVED Office of Oil & Gas DEC 10 2012			

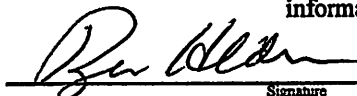
OPEN FLOW DATA

* Waterflood Producer

WV Department of
Environmental Protection

Producing formation	Fifth Sand	Pay zone depth (ft)	2555'-2558'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests	* Hours		
Static rock pressure	* psig (surface pressure)	after	* Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests	Hours		
Static rock pressure	psig (surface pressure)	after	Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature


Date

Were core samples taken? No

Were cuttings caught during drilling? No 33.05664

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Treatment : Treated perms 2555'-2558', 2559.5'-2561', 2563'-2564', & 2565.5'-2568.5' w/ 500 gals 15% HCL, 222 bbls cross linked gel, and 10,000# 20/40 sand.

Well Log : All depths are measured relative to KB (8' AGL).

Shale w/ sand streaks	0	-	205
Coal	205	-	214
Shale w/ sand streaks	214	-	760
Sand	760	-	792
shale	792	-	932
sand	932	-	1012
shale	1012	-	1144
sand	1144	-	1183
shale	1183	-	1232
sand	1232	-	1246
shale	1246	-	1500
sand	1500	-	1519
shale	1519	-	1535
sand	1535	-	1558
shale	1558	-	1579
Big Lime	1579	-	1648
Big Injun	1648	-	1730
shale	1730	-	2148
sand	2148	-	2159
shale	2159	-	2250
sand	2250	-	2388
shale	2388	-	2554
Fifth Sand	2554	-	2570
shale	2570	-	2660
TD	2660		

T.D. -Logger	2650	KB
T.D. -Driller	2660	KB

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: ROBERT & ROSEMARY CONNER Operator Well No.: MC-52A

LOCATION: Elevation: 1106.82' Quadrangle: MAJORSVILLE, WV-PA7.5'

District: WEBSTER County: MARSHALL
Latitude: Feet South of 39 Deg. 53 Min. 45.04 Sec.
Longitude: Feet West of 80 Deg. 37 Min. 20.69 Sec.

Company: CNX Gas Company, LLC

	Casing & Tubing	Used in drilling	Left in well	Cement Fill Up (# of Sacks)
Address: 2481 John Nash BLVD	9 5/8"	40'	40'	SANDED IN
Bluefield Wv 24701	7"	343.6'	343.6'	60 SKS
Agent: Les Arrington				
Inspector: Bill Hatfield				
Date Permit Issued: 6/18/2008				
Date Well Work Commenced: 7-31-2008				
Date Well Work Completed: 8/03/2008				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable <u>Rig</u>				
Total Depth (feet): 613'				
Fresh Water Depth (ft.): 300'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? No				

Coal Depths (ft.):

OPEN FLOW DATA

Producing formation Pittsburgh COAL SEAM depth (ft) 613'
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Gas Well DOE MC-52A (API No. 47-5101147) is a horizontal well for CNX Gas Company, LLC. Refer to the attached information for additional information.

Signed: Luke Beebe
By: Luke Beebe Drilling Manager
Date: 2/4/13

51.01147

ATTACHMENT A

Marshall County CBM Well No. MC-52A PG Drill Log

API #47-5101147

[illegible]

COPY

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Strope, Craig D. Operator Well No.: MC-114

LOCATION: Elevation: 1179.48' Quadrangle: Majorsville

District: Webster County: Marshall
Latitude: Feet South of 39 Deg. 57 Min. 30 Sec.
Longitude: Feet West of 80 Deg. 32 Min. 30 Sec.

Company: CNX Gas Company, LLC

	Casing & Tubing	Used in drilling	Left in well	Cement Fill Up (# of Sacks)
Address: 2481 John Nash BLVD	13 3/8"		42'	Sanded in
Bluefield WV 24701	9 5/8"		378.2'	100 sks Class A
Agent: Les Arrington	7"		904.2'	150 sks Class A
Inspector: David Cowan				
Date Permit Issued: 11/10/2008				
Date Well Work Commenced: 12/4/2008				
Date Well Work Completed: 12/22/2008				
Verbal Plugging:				
Date Permission granted on: 11-10-2008				
Rotary Cable <u>Rig</u>				
Total Depth (feet): 747'				
Fresh Water Depth (ft.): 280'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N/A				
Coal Depths (ft.): 704.90', 787.28"				

OPEN FLOW DATA

Producing formation Pittsburgh depth (ft) 787.28'
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Gas Well DOE MC-114 (API No. 47-5101169) is a horizontal well for CNX Gas Company, LLC. Refer to the attached information for additional information.

Signed: Joshua Hinton
By: JOSHUA HINTON
Date: 1-26-2010

5/01/69

ATTACHMENT A

Marshall County CBM Well No. MC-114 Drill Log

API # 47-5101169

Depth	Description
GL-10'	FILL
10'-25'	SHALE
25'-28'	RR
28'-45'	SHALE
45'-105'	SAND
105'-195'	SHALE
195'-210'	SAND
210'-211'	COAL
211'-285'	SHALE
285'-360'	SAND
360'-365'	RR
365'-370'	SHALE
370'-372'	COAL
372'-420'	SHALE
420'-425'	RR
425'-460'	SAND
460'-495'	SHALE
495'-500'	RR
500'-530'	SHALE
530'-535'	COAL
535'-680'	SHALE
680'-704'	SAND
704'-708'	COAL
708'-787'	SAND

51-01169

[illegible]

Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

COPY

Farm name: Strope, Craig D. Operator Well No.: MC-114A

LOCATION: Elevation: 1155.25 Quadrangle: Majorsville

District: Webster County: Marshall
Latitude: Feet South of 39 Deg. 57 Min. 30 Sec.
Longitude: Feet West of 80 Deg. 32 Min. 30 Sec.

Company: CNX Gas Company, LLC

	Casing & Tubing	Used in drilling	Left in well	Cement Fill Up (# of Sacks)
Address: 2481 John Nash BLVD	9 5/8"		41'	Sanded in
Bluefield WV 24701	7"		383.2'	60 sks Class A
Agent: Les Arrington				
Inspector: David Cowan				
Date Permit Issued: 11/10/2008				
Date Well Work Commenced: 12/5/2008				
Date Well Work Completed: 12/22/2008				
Verbal Plugging:				
Date Permission granted on: 11/10/2008				
Rotary Cable <u>Rig</u>				
Total Depth (feet): 440'				
Fresh Water Depth (ft.): 280'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N/A				

Coal Depths (ft.): 704.90', 787.28'

OPEN FLOW DATA

Producing formation Pittsburgh depth (ft) 787.28
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Gas Well DOE MC-114A (API No. 47-5101170) is a horizontal well for CNX Gas Company, LLC. Refer to the attached information for additional information.

Signed: [Signature]
By: JOSEPH H. HINTON
Date: 1-26-2010

[illegible]

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Randy and Lisa McDowell B 10HOperator Well No.: 627054LOCATION Elevation: 1356'District: MeadeQuadrangle: WileyvilleCounty: MarshallLatitude: 1200 ft South of 39° 45' 00"Longitude: 4600ft West of 80° 40' 00"

Company: Chesapeake Appalachia, L.L.C.
P.O. Box 18496
OKC, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
13 3/8	1,230'	1,230'	CTS
9 5/8	2,668'	2,668'	CTS
5 1/2	11,453'	11,453'	1,546 sks

Agent: James E. Grey

Inspector: Bill Hendershot

Date Permit Issued: 05/20/2009

Date Well work commenced: 07/16/2009

Date Well Work completed: 08/06/2009

Verbal Plugging Permission

Granted on / /

Rotary ☒ Cable ☐ Rig

Total Depth (ft): 11,385 TVD (ft): 7,135

Fresh Water Depth (ft): N/A

Salt Water Depth (ft.): NAIs coal being mined in area (Yes ☐ No ☒)

Coal Depths (ft):

Was this well logged and plugged back?

Yes ☐ No ☒ if yes -

depth cement plug set _____

Open Flow Data

1st Producing Formation

Pay Zone Depth 7,646 ft to 11,248 ft

Gas: Initial Open Flow 2,111 Mcf/day

Oil: Initial Open Flow N/A bbl/day

Final Open Flow N/A Mcf/day

Final Open Flow N/A bbl/day

Time of Open Flow between Initial and Final Tests In hours

Line

Static Rock Pressure 3,924 psig after

hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Chesapeake Energy

Well No.: 627054

Perforated Intervals

1 st Stage	Marcellus	10	holes from	10,926 ft to 11,248 ft
2 nd Stage	Marcellus	10	holes from	10,526 ft to 10,848 ft
3 rd Stage	Marcellus	10	holes from	10,126 ft to 10,448 ft
4 th Stage	Marcellus	10	holes from	9,646 ft to 10,048 ft
5 th Stage	Marcellus	10	holes from	9,246 ft to 9,568 ft
6 th Stage	Marcellus	10	holes from	8,846 ft to 9,168 ft
7 th Stage	Marcellus	10	holes from	8,446 ft to 8,768 ft
8 th Stage	Marcellus	10	holes from	8,046 ft to 8,368 ft
9 th Stage	Marcellus	10	holes from	7,646 ft to 7,968 ft

51-01241

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl	Breakdown Pressure 6,569 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,840 psi	MTP 9,328 psi
	Total Fluid 16,925 bbl	Total Nitrogen 0 scf	Total Sand 301,540 lb 100 mesh
			Total Sand 303,563 lb of 40/70
	ISIP 5,564 psi	5 min 4,451 psi	
2nd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,885 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,956 psi	MTP 9,250 psi
	Total Fluid 12,151 bbl	Total Nitrogen 0 scf	Total Sand 303,125 lb 100 mesh
			Total Sand 320,220 lb of 40/70
	ISIP 4,925 psi	5 min 4,118 psi	
3rd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,033 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,788 psi	MTP 9,812 psi
	Total Fluid 13,292 bbl	Total Nitrogen 0 scf	Total Sand 301,342 lb 100 mesh
			Total Sand 313,637 lb of 40/70
	ISIP 4,596 psi	5 min 3,743 psi	
4th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,946 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,630 psi	MTP 9,542 psi
	Total Fluid 12,081 bbl	Total Nitrogen 0 scf	Total Sand 304,836 lb 100 mesh
			Total Sand 312,522 lb of 40/70
	ISIP 5,188 psi	5 min 3,767 psi	
5th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,798 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,658 psi	MTP 9,456 psi
	Total Fluid 11,921 bbl	Total Nitrogen 0 scf	Total Sand 301,088 lb 100 mesh
			Total Sand 313,950 lb of 40/70
	ISIP 4,969 psi	5 min 3,935 psi	
6th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,545 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,830 psi	MTP 9,695 psi
	Total Fluid 13,241 bbl	Total Nitrogen 0 scf	Total Sand 308,522 lb 100 mesh
			Total Sand 253,348 lb of 40/70
	ISIP 4,162 psi	5 min 3,485 psi	
7th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,838 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,135 psi	MTP 8,721 psi
	Total Fluid 11,795 bbl	Total Nitrogen 0 scf	Total Sand 300,048 lb 100 mesh
			Total Sand 309,897 lb of 40/70
	ISIP 4,736 psi	5 min 3,922 psi	
8th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,545 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,544 psi	MTP 9,502 psi
	Total Fluid 11,982 bbl	Total Nitrogen 0 scf	Total Sand 302,011 lb 100 mesh
			Total Sand 308,492 lb of 40/70
	ISIP 4,875 psi	5 min 3,982 psi	
9th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,300 psi	
	Average Rate 100 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,477 psi	MTP 8,210 psi
	Total Fluid 12,017 bbl	Total Nitrogen 0 scf	Total Sand 310,202 lb 100 mesh
			Total Sand 301,434 lb of 40/70
	ISIP 4,519 psi	5 min 3,825 psi	

Well Log

Signed:

CHESAPEAKE APPALACHIA, LLC

By:

Date:

1-5-10